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Superfund to Aid Arroyo Cleanup, Officials Hope

LA CANADA FLINTRIDGE

By EDMUND NEWTON
 TIMES STAFF WRITER

You can see it from the ridge overlooking the dusty scrub of the Arroyo Seco and the Jet Propulsion Laboratory's jumble of buildings.

There are a couple of towers—like a pair of big grain silos—some tanks, and a network of pipes and ducts. City officials sometimes call it "Willy Wonka's Chocolate Machine."

It's Pasadena Water and Power's Arroyo Seco water treatment plant, and the only visible evidence of the existence, somewhere beneath the dry river bed, of a wad of toxic waste dumped there 40 or 50 years ago, probably by rocket scientists.

The U.S. Environmental Protection Agency placed the site on the Superfund list last week, making it a national environmental cleanup priority. Sometime in the next three to five years, if the EPA abides by its recent commitment to speed up the cleanups, workers will complete the job of sopping up the chemicals and solvents there.

"It's a victory for the environment," said Charles Thomas, the city's environmental affairs coordinator.

By most accounts, the chemicals were probably dumped there between 1945 and 1958, when JPL was developing the Corporal and Sergeant missile systems for the U.S. Army and Explorer 1, the first U.S. satellite.

In those days, the practice was to dispose of chemical wastes in cesspools that were designed to allow liquid wastes to seep into the surrounding soil. "We've identified a number of cesspools by talking with old employees and retired employees and by looking at aerial photographs," said Charles Burt, JPL's manager for environmental affairs.

The problem was, experts discovered years later, that JPL sits at the edge of a stream bed through which water drains from the San Gabriel Mountains, recharging the Raymond Basin to the south.

The Raymond Basin is a 40-square-mile underground water system extending from northern Pasadena into parts of Arcadia and South Pasadena. It is a source of tap water for communities in the western San Gabriel Valley and, if Pasadena's Devil's Gate Dam project is implemented, it would become a potential storage area for vast amounts of water imported from other parts of the state.

The city closed four wells after its technicians discovered in 1980 that city wells southeast of JPL were contaminated with traces of the toxins trichloroethylene (TCE), perchloroethylene (PCE)

and carbon tetrachloride (CTC).

The four wells were reopened two years ago, when JPL agreed to pay for the \$1.2-million treatment plant and to contract with Calgon Carbon Corp. to run it.

But a large quantity of underground water remains untreated. The Superfund project would be designed to clean all the water and return it to the ground.

JPL, which is currently administered by Caltech for the National Aeronautics and Space Administration, does not officially acknowledge responsibility for the waste. NASA, JPL's prime funding source, would be responsible for paying the still-unknown cost of the cleanup if the contaminants are traced to rocket experiments.

The Superfund designation means that JPL will conduct tests to determine exactly what the source of the chemicals is and how they have spread. Then, with the approval of federal, state and regional regulatory agencies, it will develop a cleanup plan.

Among the possible techniques that could be used are vitrifying contaminated soil—exposing it to such high temperatures that it fuses, releasing the chemicals as gases—and pumping ground water through a filtration system and returning it to the ground.